Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Please cancel claims 1 to 90 without prejudice or disclaimer.

Please add claims 91 to 134 as follows:

91. (new) A method for reducing the level of active biological contaminants or pathogens in a serum, plasma or protein sample, said method comprising:

(i) adding to said serum, plasma or protein sample at least one stabilizer wherein said at least one stabilizer is selected from the group consisting of tert-butyl-nitrosobutane (tNB), alpha-phenyl-tert-butylnitrone (PBN), 5,5-dimethylpyrroline-N-oxide (DMPO), tert-butylnitrosobenzene (BNB), alpha-(4-pyridyl-1-oxide)-N-tert-butylnitrone (4-POBN), 3,5-dibromo-4-nitroso-benzenesulphonic acid (DBNBS), heparin, acetone, reduced glutathione, glycylglycine, DMEM, diosmin, pupurogalin, gallic acid, silymarin, propylene glycol, polypropylene glycol, butanediol, formamide, solutol, propyl gallate, citrate, propanediol, isopropyl myristate, courmaric acid, and Trolox C; and

(ii) irradiating said serum, plasma or protein sample with a dose of gamma radiation effective to reduce the level of active biological contaminants or pathogens in said serum, plasma or protein sample.

92. (new) The method of claim 91 wherein said serum, plasma or protein sample is at a temperature below ambient temperature during irradiation.

93. (new) The method of claim 92 wherein said temperature is below -20°C during irradiation.

94. (new) The method of claim 92 wherein said temperature is below -40°C during irradiation.

95. (new) The method of claim 92 wherein said temperature is below -60°C during irradiation.

96. (new) The method of claim 92 wherein said temperature is below -78°C during irradiation.

97. (new) The method of claim 92 wherein said temperature is below -196°C during irradiation.

98. (new) The method of claim 91 wherein said serum, plasma or protein sample is maintained in

an inert atmosphere during irradiation.

99. (new) The method of claim 98 wherein said serum, plasma or protein sample is maintained under vacuum during irradiation.

100. (new) The method of claim 91 wherein the protein sample comprises an antibody, immunoglobulin, hormone, growth factor, anticoagulant, clotting factor, complement protein, or lipo-protein.

101. (new) The method of claim 100 wherein the clotting factor is selected from the group consisting of Factor I (fibrinogen), Factor II (prothrombin), Factor III (tissue factor), Factor V (proaccelerin), Factor VI (accelerin), Factor VII (proconvertin, serum prothrombin conversion), Factor VIII (antihemophiliac factor A), Factor IX (antihemophiliac factor B), Factor X (Stuart-Prower factor), Factor XI (plasma thromboplastin antecedent), Factor XII (Hageman factor), Factor XIII (protransglutamidase), von Willebrands factor (vWF), Factor Ia, Factor IIa, Factor IIIa, Factor Va, Factor VIa, Factor VIIa, Factor VIIIa, Factor IXa, Factor Xa, Factor XIa, Factor XIIa and Factor XIIIa.

102. (new) The method of claim 100 wherein the immunoglobulin is a polyclonal or monoclonal immunoglobulins or mixtures thereof.

103. (new) The method of claim 102 wherein the immunoglobulin is immunoglobulin G, immunoglobulin M, immunoglobulin A, immunoglobulin E or mixtures thereof.

104. (new) The method of claim 91 wherein the protein sample contains one or more proteins selected from the group consisting of protein C, protein S, alpha-1 anti-trypsin (alpha-1 protease inhibitor), heparin, insulin, butyl-cholinesterase, warfarin, streptokinase, tissue plasminogen activator (TPA), erythropoietin (EPO), urokinase, neupogen, antithrombin-3, alpha-glucosidase, hemoglobin and albumin.

105. (new) The method of claim 91 wherein the protein sample contains one or more proteins produced by recombinant methods.

106. (new) The method of claim 91 wherein the protein sample contains a plasma protein fraction.

107. (new) The method of claim 106 wherein the plasma protein fraction is selected from the group consisting of Plasma-Plex®, Protenate®, Plasmanate® and Plasmatein®.

108. (new) The method of claim 91 wherein the serum sample contains fetal bovine serum.

109. (new) The method according to claim 91 wherein said irradiation is applied at a rate of at least about 3 kGy/hour to at least about 45 kGy/hour.

110. (new) The method of claim 91 wherein the at least one stabilizer is propylene glycol.

111. (new) The method of claim 110 wherein the concentration of propylene glycol is about 1.0 to about 2.2 M.

112. (new) The method of claim 91 wherein a combination of two or more stabilizers is added to said plasma, serum or protein sample.

113. (new) The method of claim 112 wherein the two or more stabilizers are selected from the group consisting of DMSO, mannitol, propylene glycol and trehalose.

114. (new) The method of claim 113 wherein the concentration of DMSO is about 1.0 to about 3.1 M.

115. (new) The method of claim 113 wherein the concentration of mannitol is about 135 to about 150 mM.

116. (new) The method of claim 113 wherein the concentration of trehalose is about 1 to about 100 mM.

117. (new) The method of claim 91 further comprising contacting the serum, plasma or protein sample with one or more sensitizers.

118. (new) The method of claims 91 wherein the sample contains one or more residual solvents.

119. (new) The method of claim 118 wherein the residual solvent is water.

120. (new) The method of claim 118 wherein the residual solvent is a non-aqueous solvent.

121. (new) The method of claim 118 wherein the residual solvent content is reduced prior to irradiation.

122. (new) The method of claim 121 wherein the residual solvent content is reduced to about six to about eight percent.

123. (new) The method of claim 121 wherein the residual solvent content is reduced by a process selected from the group consisting of lyophilization, drying, concentration, evaporation, chemical extraction, spray drying and vitrification.

124. (new) The method of claim 91 wherein the total dose of gamma irradiation is at least about 25 kGy.

125. (new) The method of claim 91 wherein the total dose of gamma irradiation is at least about 45 kGy.

126. (new) The method of claim 91 wherein the total dose of gamma irradiation is at least about 75 kGy.

127. (new) A composition produced by the method of claim 1.

128. (new) A composition produced by the method of claim 110.

129. (new) A composition produced by the method of claim 111.

130. (new) A composition produced by the method of claim 112.

131. (new) A composition produced by the method of claim 113.

132. (new) A composition produced by the method of claim 114.

133. (new) A composition produced by the method of claim 115.

134. (new) A composition produced by the method of claim 116.